2003 BARLEY CHEMICAL USAGE

Nitrogen was applied to 93 percent of the 2003 barley planted acreage in the following Program States: California, Idaho, Minnesota, Montana, North Dakota, Pennsylvania, South Dakota, Utah, Washington, Wisconsin, and Wyoming. Nitrogen applications ranged from 37 percent of the acres treated in Wisconsin to 99 percent in Washington. Barley growers used an average of 1.4 applications per acre while applying 40 pounds of nitrogen per treatment. This computes to a crop year rate per acre of 60 pounds. In the Program States, 79 percent of the acres of barley planted received a phosphate application, while potash was applied to 29 percent of the acreage planted to barley.

Herbicides were applied to 93 percent of the barley planted acreage in 2003. MCPA was the most widely applied herbicide with 45 percent of the planted acreage being treated. It was applied at a rate of 0.32 pounds per acre. The next three most widely applied herbicides for barley, namely 2, 4-D, bromoxynil, and fenoxaprop, were applied to 30, 29, and 28 percent, respectively, of the planted barley acreage.

In 2003, 3 percent of the barley planted acreage was treated with insecticides. The insecticides applied to barley were all put on less than one percent of the planted acres; therefore, no area applied values were published. Based on total pounds applied, methyl parathion at 9,000 pounds, was the most widely used insecticide on barley acres planted in the Program States. Fungicides were applied to 7 percent of the barley planted acreage in the States in the survey program.

BARLEY: Acreage, Percent Receiving Chemicals, Number of Applications, Rates per Application, Selected States, 2003

State	Area Planted	Nitrogen			Phosphate			Potash			Herbicide	Insecticide
		Area Applied 1/	Applications	Rate per Application	Area Applied 1/	Applications	Rate per Application	Area Applied 1/	Applications	Rate per Application	Area Applied 1/	Area Applied 1/
	1,000 Acres	Percent	Number	Pounds	Percent	Number	Pounds	Percent	Number	Pounds	Percent	Percent
MN	**190**	**91**	**1.4**	**45**	**87**	**1.0**	**32**	**66**	**1.0**	**32**	**89**	**8**
ND	2,050	98	1.7	33	91	1.0	27	20	1.0	10	98	4
SD	75	82	1.2	32	78	1.1	29	13	1.0	18	86	2/
WI	55	37	1.0	24	36	1.0	33	44	1.0	74	21	2/
Total 3/	4,850	93	1.4	40	79	1.0	29	29	1.0	20	93	3

1/ Refers to acres receiving one or more applications of a specific chemical.
2/ Data not published due to insufficient number of reports.
3/ Refers to eleven major barley states including: CA, ID, MN, MT, ND, PA, SD, UT, WA, WI and WY.

BARLEY: Frequency and Extent of Chemical Usage By Active Ingredient, Minnesota, 2003 1/

Ingredient	Area Applied 2/	Applications	Rate per Application	Rate per Year	Total Applied
	Percent	Number	Pounds per Acre	Pounds per Acre	1,000 Pounds
Herbicides					
2,4-D	23	1.0	0.52	0.52	22
Bromoxynil	30	1.0	0.23	0.24	14
Bromoxynil octanoate	16	1.0	0.27	0.27	8
Fenoxaprop	43	1.0	0.06	0.06	5
Fluroxypyr	10	1.0	0.11	0.11	2
MCPA	63	1.0	0.29	0.29	35
Thifensulfuron	16	1.0	0.02	0.02	1
Tribenuron-methyl	6	1.0	0.005	0.005	3/
Insecticides					
Methyl parathion	5	1.3	0.12	0.16	1
Fungicides					
Propiconazole	19	1.1	0.06	0.07	3
Pyraclostrobin	5	1.0	0.05	0.05	1
Tebuconazole	14	1.0	0.11	0.11	3

1/ Planted acres in 2003 for Minnesota were 190,000 acres.
2/ Refers to acres receiving one or more applications of a specific chemical.
3/ Total applied is less than 500 lbs.